

Amendments to the Claims

1. (currently amended) In a wireless communication system adapted to provide communication services to multiple mobile stations operating within a given coverage area, wherein the system dynamically allocates radio frequency bandwidth among the mobile stations according to a bandwidth allocation algorithm, and wherein the in which a base station uses a radio frequency bandwidth is used to send voice or data traffic to the mobile stations as part of providing the communication services to the active mobile stations in a coverage area served by the base station, a method comprising:

dynamically allocating the radio frequency bandwidth among a first group of active mobile stations in the coverage area according to a first bandwidth allocation algorithm;

dynamically allocating the radio frequency bandwidth among a second group of active mobile stations in the coverage area according to a second bandwidth allocation algorithm;

determining that the first group of active mobile stations has met a first threshold number of active mobile stations and responsively changing the first bandwidth allocation algorithm, so as to change how the radio frequency bandwidth is dynamically allocated among the first group of active mobile stations; and

determining that the second group of active mobile stations has met a second threshold number of active mobile stations and responsively changing the second bandwidth allocation algorithm, so as to change how the radio frequency bandwidth is dynamically allocated among the second group of active mobile stations.

determining a number of active mobile stations that are concurrently operating in the given coverage area; and

~~determining that the number of active mobile stations exceeds a threshold and responsively changing the bandwidth allocation algorithm, so as to change how the system dynamically allocates the radio frequency bandwidth among the active mobile stations.~~

2. (original) A computer readable medium having stored therein instructions for causing a processor to execute the method of claim 1.

3. (currently amended) The method of claim 1, wherein responsively changing the first or second bandwidth allocation algorithm comprises switching ~~the bandwidth allocation algorithm~~ to a maximum-aggregate-traffic algorithm.

4. (currently amended) The method of claim 1, wherein responsively changing the first or second bandwidth allocation algorithm comprises switching ~~the bandwidth allocation algorithm~~ to a common-data-throughput algorithm.

5. (currently amended) The method of claim 1, wherein responsively changing the first or second bandwidth allocation algorithm comprises switching ~~the bandwidth allocation algorithm~~ to a common-power algorithm.

6. (canceled)

7. (currently amended) The method of claim 1, ~~wherein determining a number of active mobile stations that are concurrently operating in the given coverage area comprises~~ further comprising:

~~determining a current time of day; and~~

~~using a predictive model to predict the~~ that a current number of active mobile stations that are concurrently operating in the ~~given coverage area at the current time of day.~~

8. (currently amended) The method of claim 1, wherein the wireless ~~network~~ communication system is a CDMA network, and wherein the mobile station is a mobile phone.

9. (currently amended) In a CDMA network in which a base station uses a forward supplemental channel to send voice or data traffic to active mobile stations being served by the base station adapted to provide communication services concurrently to multiple mobile stations operating with a given coverage area, a method comprising:

~~determining that a threshold number of mobile stations being provided communication services are concurrently operating in the given coverage area; and~~

determining that a number of active mobile stations in a first group of the active mobile stations being served by the base station has met a first threshold and responsively changing a first bandwidth allocation algorithm for the ~~mobile stations being provided communication services in the given coverage area~~ first group, wherein the first bandwidth allocation algorithm is used to allocate ~~[[a]]~~ the forward supplemental channel among the first group of active mobile stations; and ~~mobile stations, and wherein the forward supplemental channel is used to send~~

~~voice or data traffic from a base station to the mobile stations as part of providing the communication services.~~

determining that a number of active mobile stations in a second group of the active mobile stations being served by the base station has met a second threshold and responsively changing a second bandwidth allocation algorithm for the second group, wherein the second bandwidth allocation algorithm is used to allocate the forward supplemental channel among the second group of active mobile stations.

10. (original) A computer readable medium having stored therein instructions for causing a processor to execute the method of claim 9.

11. (currently amended) The method of claim 9, wherein responsively changing the first or second bandwidth allocation algorithm comprises switching ~~the bandwidth allocation algorithm~~ to a maximum-aggregate-traffic algorithm.

12. (currently amended) The method of claim 9, wherein responsively changing the first or second bandwidth allocation algorithm comprises switching ~~the bandwidth allocation algorithm~~ to a common-data-throughput algorithm.

13. (currently amended) The method of claim 9, wherein responsively changing the first or second bandwidth allocation algorithm comprises switching ~~the bandwidth allocation algorithm~~ to a common-power algorithm.

14. (canceled)

15. (currently amended) The method of claim 9, ~~wherein determining that a threshold number of mobile stations being provided communication services are concurrently operating in the given coverage area comprises~~ further comprising:

~~determining a current time of day; and~~

using a predictive model to ~~determine~~ predict that ~~the threshold~~ a current number of mobile stations are concurrently operating in ~~[[the]]~~ a given coverage area of the base station ~~at the current time of day.~~

16. (canceled)

17. (canceled)

18. (canceled)

19. (canceled)

20. (currently amended) A wireless communication system comprising:

a base station, having an antenna arrangement for communicating over an air interface with a plurality of mobile stations in a given coverage area, wherein the base station dynamically allocates bandwidth to a first group of the mobile stations according to a first bandwidth

allocation algorithm and dynamically allocates bandwidth to a second group of the mobile stations according to a second bandwidth allocation algorithm; and

program logic, stored in data storage and executable on a processor, (i) to determine that the first group has a first number of active mobile stations are operating concurrently in the given coverage area and to change the first bandwidth allocation algorithm based on the first number, so as to change how the system dynamically allocates the radio frequency bandwidth among the active mobile stations in the first group and (ii) to determine that the second group has a second number of active mobile stations and to change the second bandwidth allocation algorithm based on the second number, so as to change how the system dynamically allocates the radio frequency bandwidth among the active mobile stations in the second group.

21. (currently amended) The system of claim 20, wherein the program logic further includes logic to change the first or second bandwidth allocation algorithm to a bandwidth allocation algorithm that substantially maximizes an aggregate data traffic throughput between the base station and the mobile stations.

22. (currently amended) The system of claim 20, wherein the program logic further includes logic to change the first or second bandwidth allocation algorithm to a bandwidth allocation algorithm that provides approximately equal data traffic throughput rates between the base station and the respective mobile stations.

23. (currently amended) The system of claim 20, wherein the program logic further includes logic to change the first or second bandwidth allocation algorithm to a bandwidth allocation algorithm in which the base station uses approximately equal power levels for transmitting data traffic to the respective mobile stations.

24. (currently amended) The system of claim 20, wherein the base station uses CDMA to communicate ~~over with air interface~~ with the mobile stations, and wherein the mobile stations are mobile phones.

25. (new) The method of claim 1, further comprising:
tracking the active mobile stations in the coverage area to determine a current number of active mobile stations in the coverage area.

26. (new) The method of claim 9, further comprising:
tracking the number of active mobile stations in the first group and the number of active mobile stations in the second group.